COMMONWEALTH OF MASSACHUSETTS
BEFORE THE
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Notice of Inquiry and Rulemaking re: 220 CMR 10.00 et seq. and G.L.c.164§69I	(	D.T.E. 98-84 EFSB 98-5

REPLY COMMENTS OF ISO-NEW ENGLAND, INC.

October 10, 2002

Commonwealth of Massachusetts
Department of Telecommunications and Energy

FURTHER COMMENTS OF ISO-NEW ENGLAND, INC.
EXECUTIVE SUMMARY

The central point of the Department and the Board's inquiry is the appropriateness of alternatives to the previously established company-specific integrated resource plans and long range forecast reporting procedures. In related fashion, the Department and the Board have inquired into the appropriate role of ISO New England, Inc. ("the ISO" or "ISO-NE") or a regional transmission organization ("RTO") in providing justification for new transmission facilities. As detailed below, the ISO believes that the regional system assessment and transmission planning process it administers provides an appropriate basis on which the Department and Siting Board may assess the needs of the power grid in Massachusetts and the need for new transmission facilities. The ISO conducts an annual system assessment and publishes an annual regional transmission plan (with quarterly updates) pursuant to a FERC approved process (see NEPOOL Open Access Transmission Tariff § 51) and with the input and review of the "Transmission Expansion Advisory Committee" ("TEAC") and the public. (The TEAC is comprised of Transmission Owners, Market Participants, State Regulators and other interested entities. The Department and Siting Board may, of course, participate as TEAC members.) Because the ISO is an independent entity, has no vested interests with regard to load forecasting and needs assessment, and subjects its forecasts and analyses to review and oversight by TEAC and the public, the annual Regional Transmission Plan ("RTEP") provides an appropriate and efficient basis for the Department and the Siting Board

to make conclusions about the status and needs of the power grid. In this proceeding, the ISO has no substantive comments on questions relating to the distribution system in Massachusetts. Finally, in the public hearing on this Notice, the Hearing Officers requested that excerpts of relevant documentation be submitted with comments. The ISO-NE herein submits excerpts of the following documents as attachments[1] to these comments, and so notes throughout the comments, when relevant.

- ?? Draft RTEP02 (Sept. 11, 2002)[2] (Sections 1, 4 and 5)
- ?? NEPOOL Forecast of Capacity, Energy, Loads and Transmission – 2002-2011 (otherwise referred to as the "CELT Report")
- ?? NEPOOL Transmission System Project Listing[3] (RTEP02, App.13.11)
- ?? ISO-NE and New York ISO ("NYISO") Joint Petition for Declaratory Order Regarding the Creation of a Northeastern Regional Transmission Organization.

I. INTRODUCTION

On August 19, 2002 the Department of Telecommunications and Energy ("Department" or "DTE") and the Energy Facilities Siting Board ("EFSB" or the "Siting Board"), on their own motions, commenced a notice of inquiry and rulemaking on proposed alternative processes to the filing of long-range forecasts by electric companies. At the public hearing on this matter, the Department and Board made provision for additional comments to be filed on

[1] These attachments are in many cases voluminous. As DTE Staff requested the ISO to provide relevant excerpts of hard copies of such documents, the ISO is providing two copies of those materials to the Department. Other parties can download such materials from ISO-NE's website (www.iso-ne.com). Visitors to the website may access the draft RTEP02 and the "CELT Report" by going to the Site Map, then Data and Reports, then Periodic Reports. The NERTO filing is under Site Map, Legal, FERC Documents.

[2] The Draft RTEP02 becomes final upon approval by the ISO-NE Board of Directors. Issuance of the final RTEP02 by the Board of Directors acts a request for proposed market solutions (*i.e.*, demand response, generation, or merchant transmission) to the needs identified in the RTEP02.

[3] This project listing is issued quarterly and reflects and summarizes the results of the most recent reliability and economic related studies, the results of studies for generators that have received approval pursuant to Section 18.4 and 18.5 of the Restated NEPOOL Agreement, and other transmission projects. *See* Draft RTEP02, App. 13.11.

October 10, 2002. ISO-NE appreciates the opportunity to comment and hereby files comments in this proceeding.

Consistent with the schedule set for Reply Comments at the September 26, 2002 hearing in these proceedings, ISO-NE files its Reply Comments.[4] In these Comments, ISO-NE provides: (1) additional description of its annual assessment of system needs, request for market solutions to ISO-identified needs, transmission planning (including load forecasting) activities[5] and the reports it produces, as well as a description of the methodology ISO-NE uses; and (2) information relevant to the questions posed in the Department's August 19, 2002 Request for Comments. ISO-NE notes that its activities and interests primarily relate to the New England power grid and wholesale market.

II. DESCRIPTION OF ISO-NE PLANNING ACTIVITIES

A. Overview of ISO-NE Regional Planning Process

ISO-NE is not only responsible for operation of New England's wholesale markets, but it is also responsible for planning the transmission system in New England. To address that responsibility, it engages in an annual Regional Transmission Expansion Plan process ("RTEP"). (The current planning document draft issued September 11, 2002 is hereinafter referred to as "RTEP02." The RTEP02 will be final upon approval by the ISO-NE Board, which is expected to take place in November). Through the RTEP process, ISO-NE analyzes the reliability of the NEPOOL system and identifies current and future needs of the system,

[4] ISO-NE provided initial comments at the September 26, 2002 hearing and indicated its willingness to provide additional comments and further detailed responses to some of the questions posed by the Department at the September 26, 2002 hearing.

including the need for new or upgraded facilities In the event that no market solution to the identified needs (*e.g.*, demand response, generating facilities, merchant transmission upgrades or elective transmission upgrades) is proposed, the RTEP identifies adequate and appropriate transmission projects to meet identified needs..

Importantly, the RTEP process is an open and annual process. The RTEP planning process continuously identifies problems and evaluates a wide range of potential solutions in a comprehensive and integrated manner. RTEP02 reflects stakeholder input and the constant updates to technical information. As new market responses are developed, ISO-NE provides the TEAC with updated system assessments as well as the revised status of possible transmission solutions. ISO-NE receives the input and guidance from the Transmission Expansion Advisory Committee ("TEAC"), which is composed of a wide variety of stakeholders including NEPOOL Participants, State governmental representatives, consultants, and other interested parties. RTEP02 §§ 1.1.1 through 1.1.3. The ISO formally identifies needs upon issuance of the RTEP by the ISO Board. Thereon, the RTEP acts as a request for proposed market solutions to the needs identified in the RTEP. These proposals may include market responses, such as demand response, generation, merchant transmission, or regulated transmission projects. The RTEP process looks at both the New England region in its entirety and ensures full coordination with neighboring systems in New York, Quebec, the Maritimes, and beyond, including Ontario and PJM. *See* RTEP02 §1.1.2.

[5] Also, ISO-NE notes its recent joint filing with New York ISO to FERC for approval of a merger of the two ISOs and establishment of the Northeastern Regional Transmission Organization ("NERTO"). Should the merger be approved, and depending on other FERC initiatives, modifications to this planning process may occur.

In conducting the assessment of the transmission system, ISO-NE considers a variety of assumptions regarding new unit in-service dates, generation availabilities, fuel costs, timing of transmission upgrades, load forecasts, and transactions with neighboring Control Areas. Attachment 1 hereto. (RTEP02 §1.1.2, Figure 1.2) The analysis includes a reliability analysis that assesses the loss of load expectation for the transmission system, with due consideration to "transportation" transmission constraints between each of the 13 RTEP Sub-Areas. ISO-NE also updates its forecasts of congestion costs (which are also based on the transportation model used for reliability assessments). This system analysis also includes incremental analysis that show the sensitivity of the system performance to changes in the modeled system load. These results are intended to be important market signals that can be used to evaluate both the reliability and economic benefits of new generation, Merchant and Elective Transmission Upgrades, as well as distributed resources. RTEP02 § 1.1.3.

The RTEP process is an annual process. In the case of the most recent analysis, RTEP02, it both updated the short term (2002-2006) analysis and conducted a longer-term analysis for the 2002-2011 timeframe. Additionally, ISO-NE conducted sensitivity analyses, based on various load, generation and transmission facility assumptions for both the 2002-06 and 2002-11 time frames. RTEP02 § 1.3.2.

As part of completing a system assessment and needs analysis, the RTEP process concludes with assessment of adequate and appropriate transmission projects to address identified needs in each sub-area. If there is an inadequate market response, RTEP02 also makes specific recommendation for transmission projects. *See* RTEP02 § 1.4; *See* Attachment 2 hereto (RTEP02 Table 1.1).

B. Description of ISO-NE Load Forecasting Methodology

ISO-NE conducts a short-range and longer range forecast. In RTEP02, these forecasts are respectively for the years 2002-2006 and 2002-2011. To generate these forecasts, which are performed for the New England system and allocated to each of the 13 RTEP sub-areas (for assessing reliability, congestion and transmission adequacy), ISO-NE develops historical data based on: hourly loads starting in 1977 as forecast in the NEPOOL Forecast of Capacity, Energy, Loads and Transmission (the "CELT Report" – Attachment 3 hereto) by reference to individual companies' FERC Forms 715; operating company hourly loads starting in 1989; real time interface and external tie hourly flows starting in July 1999; hourly generator output starting in 1989; and, hourly substation loads from the EMS State Estimator starting in September 2001. ISO-NE builds upon this process by working with transmission planners and the NEPOOL Load Forecasting Committee and Transmission Task Force. RTEP02 § 5.2.

Additionally, ISO-NE performs short-run seasonal, monthly and weekly peak load and energy forecasts for a two year period. These forecasts use historical data from 1992 to the present and develop indices of heating and cooling load (weather dependent use) and indices of heating and cooling base load (non-weather sensitive) from non-holiday weekday historical data in the peak periods. A range of forecasts is produced with the "base forecast" using the assumption that weather is at the 95th percentile of the maximum experienced.

C. Overview of the Proposed Northeastern Regional Transmission Organization ("NERTO") Planning Process

ISO-NE and NYISO have proposed to merge and form NERTO. Should that proposal be approved by FERC, and all other necessary regulatory approvals are received, the

combined organization will have the same functions, including transmission planning, as ISO-NE now has (as described above). In the filing with FERC,[6] the NERTO planning process is similar to ISO-NE's existing RTEP process. Attachment 4 hereto is the relevant excerpt from the NERTO filing (Attachment VII to the NERTO filing) that describes the planning process in detail. Generally, the process remains an annual, collaborative process that utilizes a ten year planning horizon with a ten year capacity and load forecast and an assessment of resource adequacy, transmission adequacy, and projected congestion levels.

Similar to the RTEP process, presentations at the "Participant Advisory Committee" (referred to as "PAC" and operationally equivalent to the TEAC) and the publication of the needs assessment would serve as a request for solutions from the market (*e.g.*, demand response or generation). NERTO then will consider the responses in its needs assessment, and where market solutions are not proposed or do not adequately address the need, the NERTO, like ISO-NE presently, will identify needed transmission upgrades. As with the existing RTEP process, NERTO requires issuance of an RFP for construction of major Reliability and Market Efficiency Upgrades.

III. RESPONSES TO QUESTIONS POSED BY THE DEPARTMENT AND SITING BOARD IN THE NOTICE OF INQUIRY

1. *Does the proposed alternative process provide all the information that the Department needs to help ensure distribution system reliability? What additional elements, if any, should be included in an alternative process that focuses on distribution system reliability?*

[6] Many aspects of the NERTO proposal are now being negotiated and consequently may change.

2. *Are there issues other than those raised in Section II.A. above which must necessarily be included in an alternative process that is consistent with the public interest? If so, what are these issues, and why are they important?*

3. *Is further definition of any element of the alternative process proposed in Section II.B needed to ensure that there is a common understanding of electric company responsibilities under the alternative process?*

Response: These questions concern reporting requirements for electric distribution companies subject to Department jurisdiction and mostly concern distribution company issues. ISO-NE does not have direct responsibility for distribution level reporting, but does offer some comments on these questions. Note that the RTEP process and reports do provide a source of advance notice to the Department and Siting Board of potential transmission projects. These results are in part driven by information provided by the Distribution Companies, including the loads and distributed resources that are included in the distribution system forecasts and that are in part captured in FERC 715 filings and other reports. Such reports also show the penetration of demand side management, and load participation in NEPOOL and utility sponsored demand response and conservation programs. Going forward, it will be increasingly important to capture the impact of Distributed Generation ("DG") that may become operational. Again, ISO-NE does not have responsibility for distribution systems, but is dependent upon information provided by distribution companies and load serving entities to the local transmission companies who in turn provide input to ISO-NE.

4. *Can the need for a transmission project predicated on load growth be described more effectively, efficiently, and consistently though standardized annual forecasts or by project-specific inquiry?*

Response: A determination of what constitutes an adequate and appropriate transmission project depends on additional and more detailed project-specific analysis than just

a load forecast. While load forecasts are a major input, transmission projects typically solve regional needs and may also be driven by new generation, fuel forecasts, unit availability and other generation issues. Also, the addition of demand response and Elective or Merchant transmission impacts the need for new regulated transmission.

Under the FERC-approved NEPOOL Open Access Transmission Tariff ("NOATT"), there are six categories of transmission Upgrades: reliability upgrades; economic upgrades; generation interconnection; elective transmission upgrades; merchant transmission upgrades; and "quick fix" upgrades. In this regard, because each of these types of upgrades address a different type of "need," a regular assessment of the bulk power system, such as the one performed by ISO-NE, is the most effective, efficient and thorough method to identify adequate and appropriate transmission projects.

With regard to a situation in which load growth results in concerns about continued adherence to regional reliability criteria, more detailed analysis of the power system may be needed in order to determine the type of transmission project that most appropriately and adequately addresses that need. For example, in the high-growth, transmission-constrained southwest Connecticut, ISO-NE also studied thermal, voltage, short circuit, transfer limit and stability issues for the existing transmission facilities and for approximately fifteen (15) other transmission project alternatives.

5. *To what extent could data from the annual report provided to the Department be used to demonstrate the need for transmission projects proposed primarily for support of the distribution system? To what extent could data from the annual report be aggregated to document the need for transmission projects intended for the transfer of bulk power within a single utility's service territory, or between service territories?*

Response: ISO-NE does not believe that data from individual distribution companies' annual reports, as described in the NOI § B.1. (or any other individual company's annual report by itself), even if aggregated with the relevant data from any other electric utility involved, can be the sole basis for determination of need for transmission facilities for bulk power transfer between areas. First, the need for a transmission line may transcend state boundaries, and thus local distribution companies' load forecasts may not capture the effects on the portion of the grid located in Massachusetts. This results from the highly integrated nature of the power grid in New England. Second, ISO-NE does only a high level review of individual distribution companies' FERC 715 reports as one input to determine the peak load for a given sub-area. There is a complex process of indexing and adjusting historical data to adjust individual FERC 715 submittals to formulate a NEPOOL wide coincident load "base case". (Obviously, for transmission projects within a single utility's territory and unrelated to outside conditions, it is possible that the individual utility's annual report could be a sufficient basis for determination of need.) Third, individual distribution companies reports may utilize different assumptions and different methodologies in compiling their FERC 715 reports. Therefore, they may not be "definitionally equivalent." As a result, if the Department and Siting Board seek to aggregate individual distribution company FERC 715 reports, that aggregation should not be the sole basis for demonstrating the need for a transmission project.

In any event, it is ISO-NE's obligation to analyze and justify the need for any market solution or transmission project in its annual RTEP. As an independent entity that is considering the entire regional transmission system, ISO-NE believes its RTEP review process is an efficient and comprehensive means of determining the need for market solutions or

transmission upgrades and whether the proposed transmission project appropriately and adequately addresses that need. ISO-NE believes that the Siting Board or Department may appropriately rely on ISO-NE's RTEP report in its assessment of the power grid in Massachusetts in any assessment of a specific project.

6. *What information should be filed in support of a load forecast submitted in the context of a transmission facility proceeding under G.L.c.164§69J?*

Response: Section II above describes how ISO-NE performs its load forecasting and how it factors load forecasts into need assessments and determinations that specific facilities should be built. Information provided by Distribution Companies and Load Serving Entities to local transmission companies who in turn submit information to ISO-NE is a vital part of this process. ISO-NE, however, does not directly deal with distribution system issues. Rather, it is ISO-NE's own annual assessment of the power grid, on both a regional and sub-area basis, that provides a rigorous analysis of needs of the system.

7. *What is the appropriate role of ISO-NE or a regional transmission organization in providing justification for new transmission facilities?*

Response: Section II above describes the existing ISO-NE RTEP planning process and the analogous proposed NERTO process. In accordance with FERC guidance and rules, the appropriate role of ISO-NE (or NERTO, as proposed) is to identify needs on the bulk power grid, to identify transmission projects that are appropriate and adequate to address identified needs in the event that market solutions (such as demand response, generation, or Merchant or Elective Transmission) do not address such needs, and to subject that analysis to the review of an advisory committee and the public.

Determination of what transmission facilities are needed is one of the core functions of ISO-NE, or any similar successor organization. Certainly, statutory requirements, such as M.G.L.c.164,§69J, exist that require the electric distribution company (or other project proponent) to obtain state regulatory approval. However, it is reasonable for a State regulatory agency, such as the DTE or Siting Board, not only to review and rely upon the documentation and justification produced by ISO-NE for determination of needs and projects, but also to participate in ISO-NE's determination through TEAC. Participation in the TEAC would ensure the greatest possible efficiency in the entire siting process through the fullest consideration of alternatives and the assurance of the best central coordination of all proposed plans.

IV. RESPONSES TO QUESTIONS POSED BY THE DEPARTMENT AND SITING BOARD AT THE HEARING.

ISO-NE also responds to questions posed by the Department at the September 26, 2002 hearing, as follows.

?? *How ISO-NE demarcates the types of transmission facilities that are included in its regional transmission expansion plan? Is it a "bright-line" test, e.g., 69kV and higher, or a functional test?*

When ISO-NE conducts its annual assessment of the bulk power system in New England to determine needs in the region, that assessment examines transmission system facilities which are either at a voltage of 69kV and higher or interconnecting new generation to the grid. Most of the focus is on the performance and planning of the "Pool Transmission Facilities" system – *i.e.*, those transmission facilities that "accommodate two-way traffic" and are rated 69kV and above. However, the impact of neighboring systems is also a major consideration.

In accordance with the requirements of the NEPOOL Tariff, ISO-NE lists transmission projects required for reliability, interconnection, economic benefit, and elective or other projects. See Attachment 5 hereto.

?? *The extent to which ISO conducts analysis of various transmission solutions when publishing its annual transmission plan?*

As discussed above, ISO-NE performs annual studies that assess the need for transmission upgrades throughout New England, that are due to load growth, resource adequacy, congestion or other causes. In examining proposed transmission projects (in the event that no market-based solution responds to address identified needs), the ISO, as appropriate, assesses various transmission solutions.

For example, in southwest Connecticut, the ISO has examined approximately 15 separate transmission configurations in determining that a 345kV transmission line was the appropriate solution. Another example is the Boston/NEMA area, which is a load pocket that is a congested area. ISO-NE is currently analyzing the situation for NEMA. That review involves thermal and voltage analysis at projected 2006 Summer Peak and 2012 Summer Peak. It also addresses dispatch constraint concerns in this area and potential short and long term transmission upgrades. To this end, it has identified several potential transmission upgrades both in Boston and on the North Shore. RTEP02 § 4.19. Additionally, to the extent that locked-in capacity in SEMA/RI is solved, other potential solutions for NEMA constraints arise.

All transmission studies ongoing in Massachusetts (and New England generally) are contained in Section 4 of the RTEP02. *See* Attachment 6 hereto.

CONCLUSION

ISO-NE hopes that these Comments help the Department/Siting Board and other parties better understand the planning function of ISO-NE and the studies it performs to determine what new transmission facilities are necessary. ISO-NE believes that such studies can provide a strong basis for the Department/Siting Board to review and approve proposed transmission projects.

If there are any questions about this filing, please contact the undersigned.

Respectfully submitted,

ISO New England Inc.

By its counsel,

_____

Eric J. Krathwohl, Esq.
Rich May, P.C.
176 Federal St., 6th Floor
Boston, MA 02110
ekrathwohl@richmaylaw.com

and

_____

Matthew F. Goldberg, Esq.,
Senior Regulatory Counsel
ISO New England Inc.

One Sullivan Road
Holyoke, MA 01040
mgoldberg@iso-ne.com

October 10, 2002

K:\UTL\ISO\98-84com.101002.doc